

H. Sugiyama et al.
U.S.S.N.: 09/889,379
Page 2

Amendments To The Claims:

This listing of claims will replace all prior versions and listings of claims in the application (Additions are underlined; deletions are bracketed.):

-
1. (Presently Amended) A method for detecting or identifying an action of a chemical species A to a substance containing DNA or RNA comprising the steps of: applying the chemical species, which can [recognize] bind to a base sequence of DNA, represented by the general formula (I):

B-L-A (I)

wherein

B is [a chemical structure containing non-natural bases which can recognize a base sequence of DNA] a pyrrole or imidazole or pyrrole-imidazole polyamide derivative which can bind to a base sequence of DNA, A is a chemical structure comprising a cyclopropane ring and having an interaction with DNA, and L is a linker which can bind together chemical structures of A and B, to a substance containing DNA or RNA; and measuring the effect to the substance.

2. (Presently Amended) The method according to claim 1, for detecting or identifying an action of a chemical species A to a substance containing DNA or RNA comprising the steps of: providing at least one compound represented by the general formula (I), which can [recognize] bind to a base sequence of DNA or RNA in each well of a multi-well plate [consisting of a plurality of wells], introducing the substance containing DNA or RNA into each well of said plate, reacting completely the compound represented by the general formula (I) with the substance containing DNA or RNA, and [assaying a state of] measuring a change in the substance containing DNA or RNA.

H. Sugiyama et al.
U.S.S.N.: 09/889,379
Page 3

3. (Presently Amended) The method according to claim 2, [wherein the compound represented by the general formula (I) present in each well is the compound which can recognize a difference of the base sequence of DNA or RNA of the substance containing DNA or RNA and the substance containing DNA or RNA which is introduced into each well is the same substance] wherein each compound represented by the general formula (I) is provided in each well of the multi-well plate, and the same substance containing DNA or RNA is introduced into each well of the plate.

C1
CDU4

4. (Presently Amended) The method according to claim 2, wherein the compound represented by the general formula (I) present in each well is the compound which can [recognize] bind to specific one type of base sequence of DNA or RNA of the substance containing DNA or RNA, and the substance containing DNA or RNA which is introduced into each well is the different substance.

5. (Presently Amended) The method according to [any of claims 1-4] claim 2, wherein the compound represented by the general formula (I) is immobilized in the well.

6. (Presently Amended) The method according to [any of claims 1-5] claim 2, wherein the chemical structure containing [non-natural bases] a pyrrole or imidazole or pyrrole-imidazole polyamide derivative, which can [recognize] bind to a base sequence of DNA or RNA, is capable of binding to [the chemical structure which can recognize] at least 2 successive bases in natural DNA or RNA of the substance containing DNA or RNA.

7-10. (Cancelled).

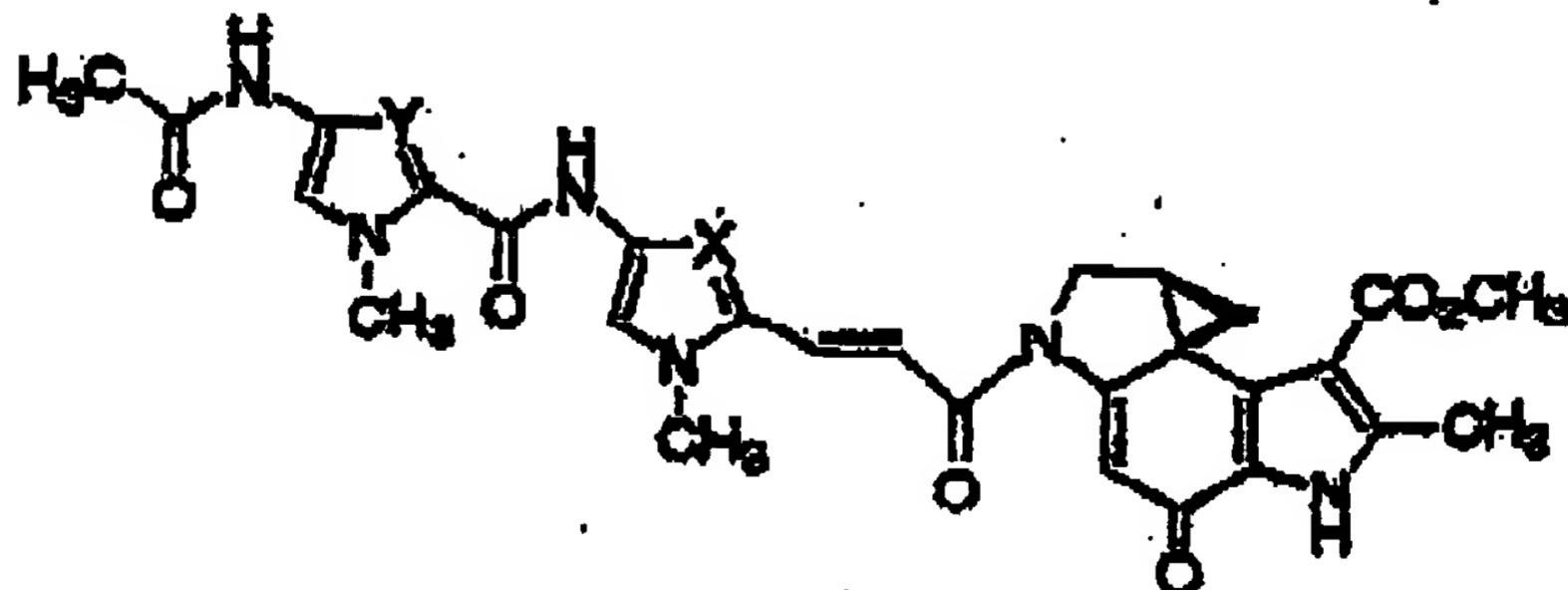
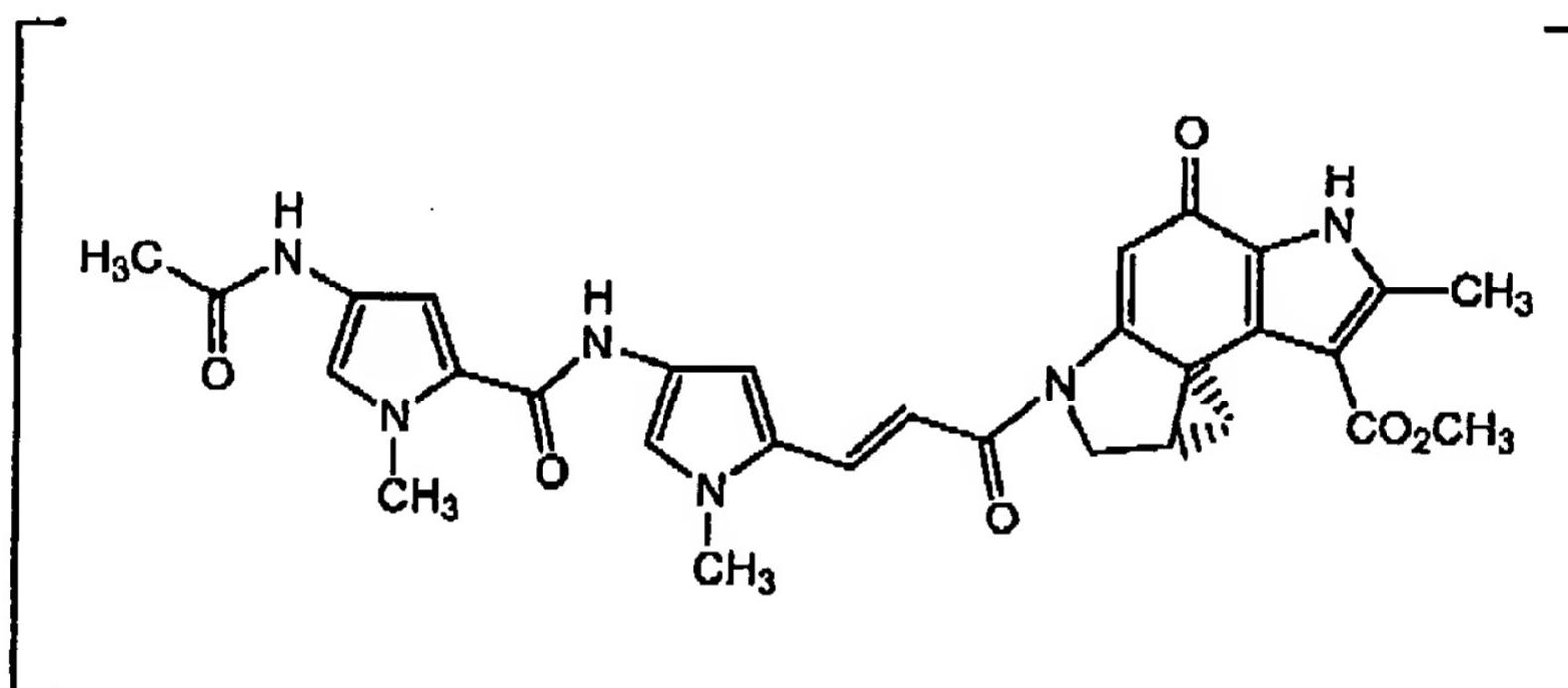
C2

11. (Presently Amended) The method according to claim [10] 1, wherein [the alkylating agent has a chemical structure having a cyclopropane ring] the chemical structure A comprising a cyclopropane ring and having an interaction with DNA is an alkylating moiety of Duocarmycin.

H. Sugiyama et al.
U.S.S.N.: 09/889,379
Page 4

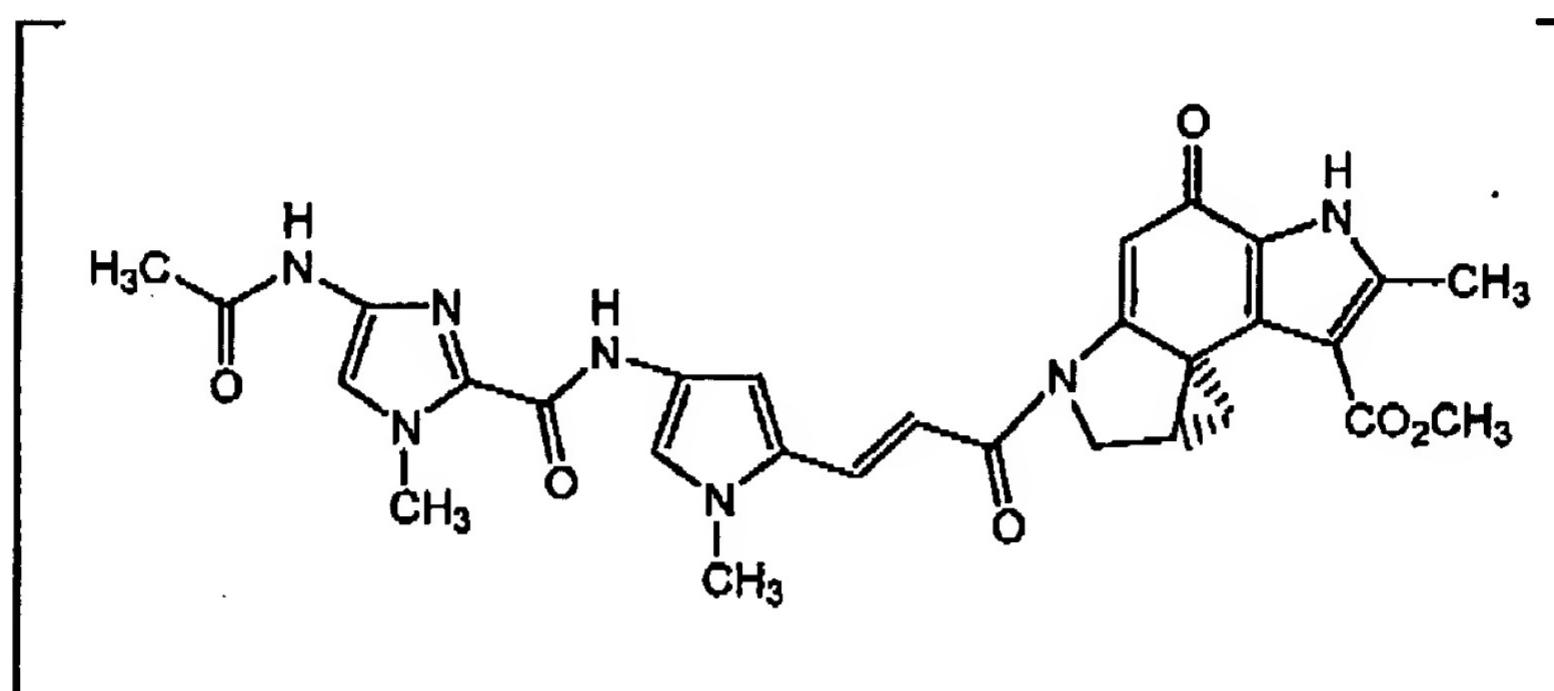
12. (Presently Amended) The method according to [any of claims 1-11] claim 1, wherein the linker, L, which can link together the chemical structures of A and B, has a chemical structure containing a vinyl group.

13. (Presently Amended) The method according to any of [claims 7-12] claims 1-8, 11, and 12, wherein the compound represented by the general formula (I) is the compound represented by the formula:



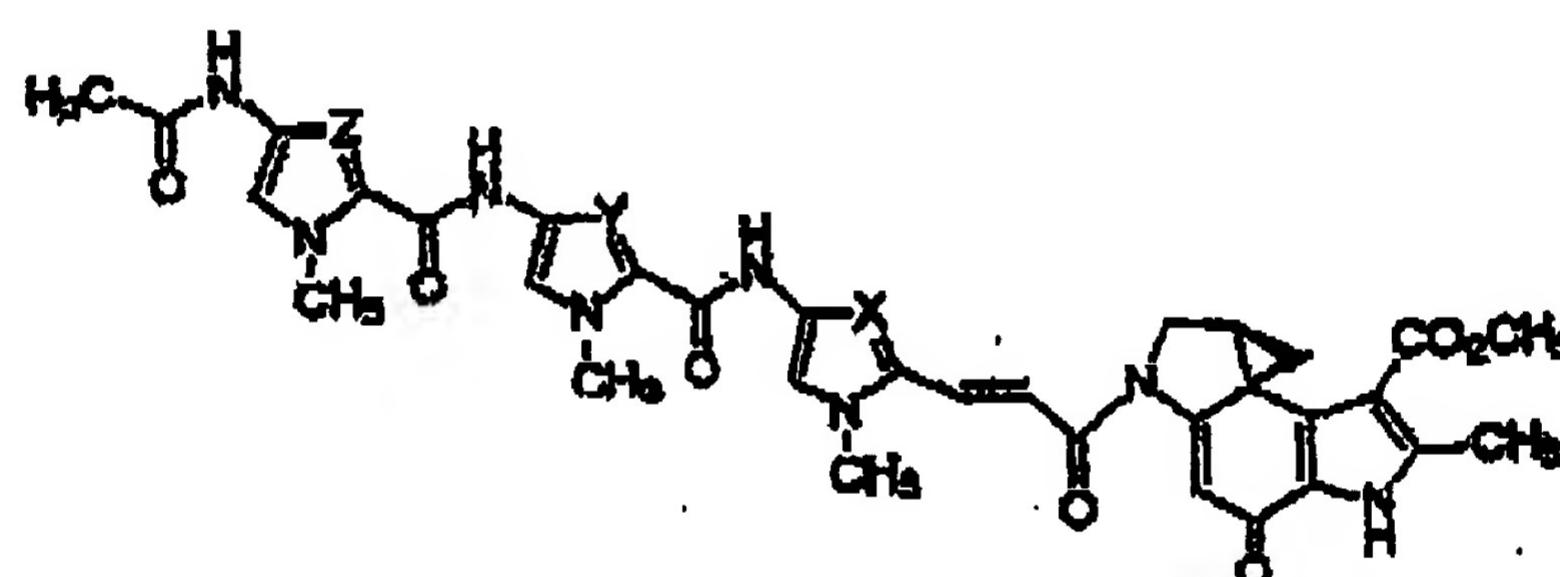
wherein X and Y are, each independently, -CH= or -N=, or

H. Sugiyama et al.
U.S.S.N.: 09/889,379
Page 5



C2

COV't.



wherein X, Y and Z are, each independently, -CH= or -N=.

14-17. (Cancelled).

18. (Presently Amended) A kit for detecting or identifying an action of a chemical species A to a substance containing DNA or RNA to perform the method according to [any of claims 1-17] claim 1.

C3

19. (Presently Amended) The kit according to claim 18 comprising a chemical species, which can [recognize] bind to a base sequence of DNA, represented by the general formula (I):

B-L-A (I)

wherein B is [a chemical structure containing non-natural bases which can recognize a base sequence of DNA] a pyrrole or imidazole or pyrrole-imidazole polyamide derivative which can

H. Sugiyama et al.
U.S.S.N.: 09/889,379
Page 6

C3
COJ-X.

bind to a base sequence of DNA, A is a chemical structure comprising a cyclopropane ring and having an interaction with DNA, and L is a linker which can bind together chemical structures of A and B;
and equipment or reagents for [assaying a state of] measuring a change in the substance containing DNA or RNA after treatment.

20-21. (Cancelled).

C4

22. (New) A method according to claim 13, wherein the method for detecting or identifying an action of a chemical species A to a substance containing DNA or RNA is a method for screening antitumor agents to tumor cells of an individual patient.

23. (New) The method according to claim 1, wherein the substance containing DNA or RNA is a cell.

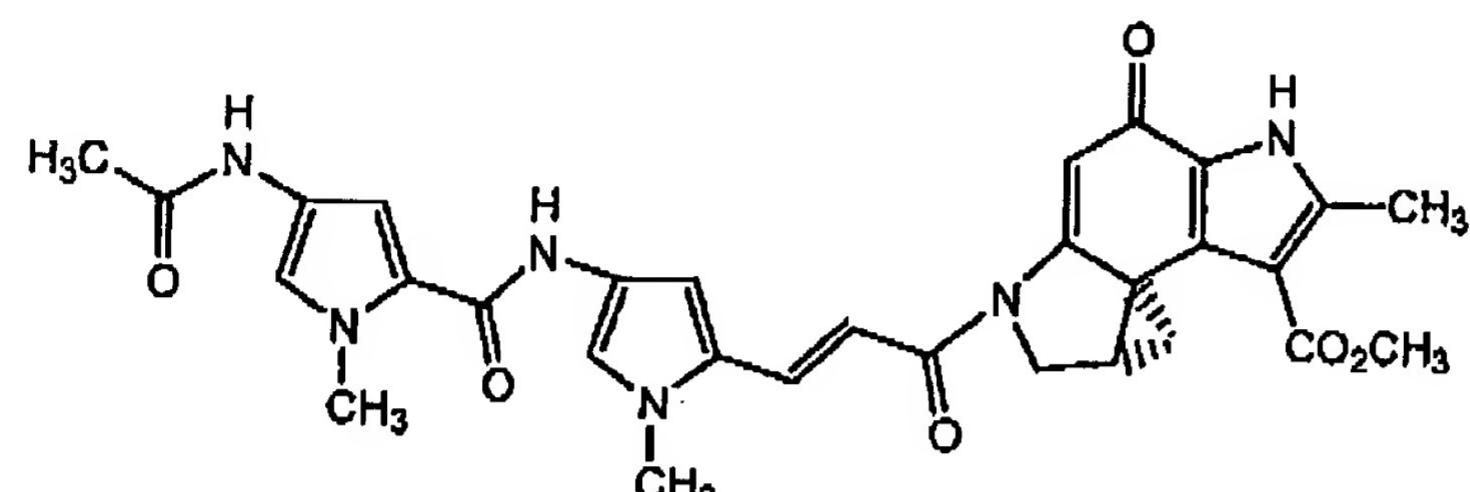
24. (New) The method according to claim 23, wherein the cell is a tumor cell.

25. (New) The method according to claim 23, the step of measuring the effect comprises detecting survival or death of the cell.

26. (New) The method according to claim 25, wherein the step of detecting cell survival or death comprises coloring of the cell.

27. (New) The method according to claim 13, wherein the compound represented by the general formula (I) is the compound represented by the formula:

H. Sugiyama et al.
U.S.S.N.: 09/889,379
Page 7



or

